

Application No. 09/735,434  
Amendment dated April 1, 2004  
Response to Office Action of October 1, 2003

Atty. Docket No. 042390.P9918  
Examiner Shrader, L.J.  
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### Amendments to the Claims

Please amend the claims as indicated below. All claims are listed below, with amended claims so marked. This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1 1. (Currently Amended) A method, comprising:  
2 determining ~~whether~~ an identifier for dynamically loadable code;  
3 pushing the identifier onto a unidirectional communication link;  
4 determining ~~whether~~ an availability schedule for the dynamically loadable code;  
5 pushing the availability schedule onto the unidirectional communication link; and  
6 pushing the dynamically loadable code onto the unidirectional communication  
7 link according to the availability schedule.
- al
- 8 2. (Original) The method of claim 1, further comprising:  
9 wherein the dynamically loadable code comprises a class definition with an  
10 object oriented programming language; and  
11 wherein the identifier identifies the class definition.
- 12 3. (Original) The method of claim 1, wherein the unidirectional  
13 communication link is a selected one of: a television data transmission, an MPEG-2  
14 transport stream, and IP-multicast.
- 15 4. (Original) The method of claim 1, further comprising:

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1 receiving data over the unidirectional communication link with a selected one of:  
2 a set top box, a personal digital assistant, a portable computer, a handheld computer,  
3 and a wireless appliance.

4 5. (Original) The method of claim 1, further comprising:  
5 receiving the identifier and the availability schedule over the unidirectional  
6 communication link; and  
7 retrieving the dynamically loadable code from said communication link according  
8 to the availability schedule.

9 6. (Original) The method of claim 5, further comprising:  
10 determining whether the dynamically loadable code is required for executing an  
11 application program; and  
12 performing said retrieving responsive to said determining.

13 7. (Original) An apparatus, comprising:  
14 a machine accessible medium providing instructions, which when executed by a  
15 machine, are capable of directing the machine to perform the operations of claim 1.

16 8. (Original) The apparatus of claim 7, said instructions including further  
17 instructions to direct the machine to perform the operations of claim 2.

18 9. (Original) The apparatus of claim 7, wherein the unidirectional  
19 communication link is a selected one of: a television data transmission, an MPEG-2  
20 transport stream, and IP-multicast.

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1           10.   (Original) The apparatus of claim 7, said instructions including further  
2 instructions to direct the machine to perform the operations of claim 4.

3           11.   (Original) The apparatus of claim 7, said instructions including further  
4 instructions to direct the machine to perform the operations of claim 5.

5           12.   (Original) The apparatus of claim 11, said instructions including further  
6 instructions to direct the machine to perform the operations of claim 6.

7           13.   (Original) A method, comprising:  
8           preparing a manifest for dynamically loadable code, said manifest comprising an  
9 identifier for dynamically loadable code, and an availability schedule;  
10           pushing the manifest onto a unidirectional communication link; and  
11           pushing the dynamically loadable code onto said communication link according  
12 to the availability schedule.

13           14.   (Original) The method of claim 13, further comprising:  
14           wherein the dynamically loadable code comprises a class definition in an object  
15 oriented programming language; and  
16           wherein the identifier identifies the class definition.

17           15.   (Original) The method of claim 13, wherein the dynamically loadable code  
18 is written in a selected one of: Java, Objective-C, C++, SmallTalk, Modula-3,  
19 Component Object Model, and an object-oriented scripting language.

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1           16.   (Original) The method of claim 13, wherein the unidirectional  
2   communication link is a selected one of: a television data transmission, an MPEG-2  
3   transport stream, and IP-multicast.

4           17.   (Original) The method of claim 13, further comprising:  
5           receiving the unidirectional communication link with a selected one of: a set top  
6   box, a personal digital assistant, a portable computer, a handheld computer, and a  
7   wireless appliance.

8           18.   (Original) The method of claim 13, further comprising:  
9           receiving the manifest over said communication link;  
10          recording the identifier and the availability schedule; and  
11          retrieving the dynamically loadable code when it is pushed onto said  
12   communication link according to the availability schedule.

13          19.   (Original) The method of claim 14, further comprising:  
14          determining whether the dynamically loadable code is required for executing an  
15   application program; and  
16          performing said retrieving responsive to said determining.

17          20.   (Original) A method for mirroring a Java-type archive file, comprising:  
18          preparing a manifest for a Java-type archive file, said manifest comprising  
19   identifiers for objects of the Java-type archive file, and an availability schedule for said  
20   objects;  
21          pushing the manifest onto a unidirectional communication link; and

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1 pushing said objects of the Java-type archive file onto the unidirectional  
2 communication link in accordance with the availability schedule.

3 21. (Original) The method of claim 20, further comprising:  
4 executing programming code;  
5 determining whether an unavailable object is required for said executing;  
6 determining whether the manifest includes an identifier corresponding to the  
7 object; and  
8 receiving said required object over the unidirectional communication link.

9 22. (Original) The method of claim 21, further comprising:  
10 storing said received object in a temporary memory location disposed within a  
11 device;  
12 wherein resetting the device causes said received object to be discarded.

13 23. (Original) The method of claim 20, wherein the manifest for the Java-type  
14 archive file includes purchasing data for said objects of the Java-type archive file, the  
15 method further comprising:  
16 identifying an unavailable object that is required for executing a program;  
17 determining whether the manifest includes an identifier corresponding to the  
18 object;  
19 receiving said required object over the unidirectional communication link; and  
20 purchasing said required object in accord with said purchasing data.

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1           24.   (Original) A method for obtaining dynamically loadable code over a push-  
2 only network, comprising:

3           receiving, over the push-only network, a manifest for dynamically loadable code,  
4 said manifest comprising an identifier for dynamically loadable code, and an availability  
5 schedule; and

6           receiving, over the push-only network, the dynamically loadable code in accord  
7 with the availability schedule.

8           25.   (Original) The method of claim 24, wherein the dynamically loadable code  
9 comprises a selected one of: a single object oriented object, a plurality of object  
10 oriented object definitions, and a Dynamic Link Library (DLL).

al 11           26.   (Original) The method of claim 24, further comprising:  
12           determining whether an application program requires dynamically loadable code;  
13 and  
14           determining whether the manifest includes an identifier corresponding to said  
15 dynamically loadable code.

16           27.   (Original) The method of claim 26, further comprising:  
17           inspecting a CLASSPATH environment for a class containing said required  
18 dynamically loadable code; and  
19           determining whether said required dynamically loadable code is unavailable.

20           28.   (Original) The method of claim 27, further comprising:

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1 adding said received dynamically loadable code to the CLASSPATH  
2 environment.

3 29. (Original) The method of claim 24, wherein the dynamically loadable code  
4 comprises a Java-type programming language class, the method further comprising:  
5 inspecting a CLASSPATH environment for a class containing the dynamically  
6 loadable code; and  
7 determining whether said required dynamically loadable code is unavailable, and  
8 responsive thereto, performing said receiving the dynamically loadable code.

9 30. (Original) The method of claim 24, further comprising:  
10 adding said received dynamically loadable code to a local storage for  
11 dynamically loadable code.

12 31. (Original) An apparatus, comprising:  
13 a machine accessible medium providing instructions, which when executed by a  
14 machine, are capable of directing the machine to perform:  
15 preparing a manifest for dynamically loadable code, said manifest comprising an  
16 identifier for dynamically loadable code, and an availability schedule;  
17 pushing the manifest onto a unidirectional communication link; and  
18 pushing the dynamically loadable code onto said communication link according  
19 to the availability schedule.

20 32. (Original) The apparatus of claim 31, said instructions including further  
21 instructions to direct the machine to perform:

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1 receiving the unidirectional communication link with a selected one of: a set top  
2 box, a personal digital assistant, a portable computer, a handheld computer, and a  
3 wireless appliance.

4 33. (Original) The apparatus of claim 31, said instructions including further  
5 instructions to direct the machine to perform:  
6 receiving the manifest over said communication link;  
7 recording the identifier and the availability schedule; and  
8 retrieving the dynamically loadable code when it is pushed onto said  
9 communication link according to the availability schedule.

al 10 34. (Original) The apparatus of claim 31, said instructions including further  
11 instructions to direct the machine to perform:  
12 determining whether the dynamically loadable code is required for executing an  
13 application program; and  
14 performing said retrieving responsive to said determining.

15 35. (Original) An apparatus for mirroring a Java-type archive file, comprising:  
16 a machine accessible medium providing instructions, which when executed by a  
17 machine, are capable of directing the machine to perform:  
18 preparing a manifest for a Java-type archive file, said manifest comprising  
19 identifiers for objects of the Java-type archive file, and an availability schedule for said  
20 objects;  
21 pushing the manifest onto a unidirectional communication link; and



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1 pushing said objects of the Java-type archive file onto the unidirectional  
2 communication link in accordance with the availability schedule.

3 36. (Original) The apparatus of claim 35, said instructions including further  
4 instructions to direct the machine to perform:

5 determining whether an unavailable object is required for executing an  
6 application;

7 determining whether the manifest includes an identifier corresponding to the  
8 object; and

9 receiving said required object over the unidirectional communication link.

10 37. (Original) The apparatus of claim 36, said instructions including further  
11 instructions to direct the machine to perform:

12 storing said received object in a temporary memory location.

13 38. (Original) The apparatus of claim 35, said instructions including further  
14 instructions to direct the machine to perform:

15 including purchasing data for said objects of the Java-type archive file in the  
16 manifest;

17 identifying an unavailable object that is required for executing a program;

18 determining whether the manifest includes an identifier corresponding to the  
19 object;

20 receiving said required object over the unidirectional communication link; and

21 purchasing said required object in accord with said purchasing data.

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1           39.   (Original) An apparatus for obtaining dynamically loadable code over a  
2 push-only network, comprising:  
3           a machine accessible medium providing instructions, which when executed by a  
4 machine, are capable of directing the machine to perform:  
5           receiving, over the push-only network, a manifest for dynamically loadable code,  
6 said manifest comprising an identifier for dynamically loadable code, and an availability  
7 schedule; and  
8           receiving, over the push-only network, the dynamically loadable code in accord  
9 with the availability schedule.

10           40.   (Original) The apparatus of claim 39, said instructions including further  
11 instructions to direct the machine to perform:  
12           determining whether an application program requires dynamically loadable code;  
13 and  
14           determining whether the manifest includes an identifier corresponding to said  
15 dynamically loadable code.

16           41.   (Original) The apparatus of claim 40, said instructions including further  
17 instructions to direct the machine to perform:  
18           inspecting a CLASSPATH environment for a class containing said required  
19 dynamically loadable code; and  
20           determining whether said required dynamically loadable code is unavailable.

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1           42.   (Original) The apparatus of claim 40, said instructions including further  
2 instructions to direct the machine to perform:

3           adding said received dynamically loadable code to the CLASSPATH  
4 environment.

5           43.   (Original) The apparatus of claim 39, said instructions including further  
6 instructions to direct the machine to perform:

7           inspecting a CLASSPATH environment for a class containing the dynamically  
8 loadable code; and

9           determining whether said required dynamically loadable code is unavailable, and  
10 responsive thereto, performing said receiving the dynamically loadable code.

11           44.   (Original) A system, comprising:

12           at least one processor; and

13           a readable medium having instructions encoded thereon, which when executed  
14 by the processor, are capable of directing the processor to perform:

15           preparing a manifest for dynamically loadable code, said manifest  
16 comprising an identifier for dynamically loadable code, and an availability schedule;

17           pushing the manifest onto a unidirectional communication link; and

18           pushing the dynamically loadable code onto said communication link  
19 according to the availability schedule.

20           45.   (Original) The system of claim 44, said instructions including further  
21 instructions to direct the processor to perform:

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1 receiving the unidirectional communication link with a selected one of: a set top  
2 box, a personal digital assistant, a portable computer, a handheld computer, and a  
3 wireless appliance.

4 46. (Original) The system of claim 44, said instructions including further  
5 instructions to direct the processor to perform:  
6 receiving the manifest over said communication link;  
7 recording the identifier and the availability schedule; and  
8 retrieving the dynamically loadable code when it is pushed onto said  
9 communication link according to the availability schedule.

a 10 47. (Original) A system for mirroring a Java-type archive file, comprising:  
11 at least one processor; and  
12 a readable medium having instructions encoded thereon, which when executed  
13 by the processor, are capable of directing the processor to perform:  
14 preparing a manifest for a Java-type archive file, said manifest comprising  
15 identifiers for objects of the Java-type archive file, and an availability schedule for said  
16 objects;  
17 pushing the manifest onto a unidirectional communication link; and  
18 pushing said objects of the Java-type archive file onto the unidirectional  
19 communication link in accordance with the availability schedule.

20 48. (Original) The system of claim 47, said instructions including further  
21 instructions to direct the processor to perform:

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1 determining whether an unavailable object is required for executing an  
2 application;  
3 determining whether the manifest includes an identifier corresponding to the  
4 object; and  
5 receiving said required object over the unidirectional communication link.

6 49. (Original) The system of claim 47, said instructions including further  
7 instructions to direct the processor to perform:

8 including purchasing data for said objects of the Java-type archive file in the  
9 manifest;

10 identifying an unavailable object that is required for executing a program;  
11 determining whether the manifest includes an identifier corresponding to the  
12 object;

13 receiving said required object over the unidirectional communication link; and  
14 purchasing said required object in accord with said purchasing data.

15 50. (Original) A system for obtaining dynamically loadable code over a push-  
16 only network, comprising:

17 at least one processor; and

18 a readable medium having instructions encoded thereon, which when executed  
19 by the processor, are capable of directing the processor to perform:

20 receiving, over the push-only network, a manifest for dynamically loadable  
21 code, said manifest comprising an identifier for dynamically loadable code, and an  
22 availability schedule; and

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1 receiving, over the push-only network, the dynamically loadable code in  
2 accord with the availability schedule.

3 51. (Original) The system of claim 50, said instructions including further  
4 instructions to direct the processor to perform:  
5 determining whether an application program requires dynamically loadable code;  
6 and  
7 determining whether the manifest includes an identifier corresponding to said  
8 dynamically loadable code.

9 52. (Original) The system of claim 50, said instructions including further  
10 instructions to direct the processor to perform:  
11 inspecting a CLASSPATH environment for a class containing said required  
12 dynamically loadable code;  
13 determining whether said required dynamically loadable code is unavailable; and  
14 adding said received dynamically loadable code to the CLASSPATH  
15 environment.

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